Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of	
Inquiry Concerning the Deployment of)
Advanced Telecommunications)
Capability to All Americans in a Reasonable) GN Docket No. 04-54
And Timely Fashion, and Possible Steps)
To Accelerate Such Deployment)
Pursuant to Section 706 of the)
Telecommunications Act of 1996)
)

COMMENTS OF MCI, INC.

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EXECUTIVE SUMMARY

As the Commission, the Administration, consumer groups, and industry analysts have recognized, advanced services play a key role in this nation's economic growth. Thus far, however, the Commission has attempted to promote broadband deployment by giving the incumbent local exchange carriers (incumbent LECs) "regulatory relief from certain unbundling requirements. While MCI disagrees that such "regulatory relief" is necessary to promote broadband deployment, having given that "relief" to the incumbent LECs, the Commission should at the very least also take steps to promote, consistent with its public pronouncements multi-modal broadband "pipes" to consumers. Freeing the current "BOC" or "cable" duopoly from regulation without aggressively promoting other modalities carries the significant risk that, in the end, American consumers will have no real choice at all among broadband providers. That being said, MCI has five specific proposals to promote ubiquitous, real broadband deployment in the United States:

First, rather than running the risk of setting the speed too high or too low, the Commission should define advanced telecommunications capability in terms of capabilities instead. In this way, the Commission can recognize the important distinction between advanced telecommunications *services* (*e.g.*, robust VoIP or real-time video streaming) and advanced telecommunications *capability* (*i.e.*, the infrastructure used to support advanced service applications), and pave the way for implementation of a layers-based approach to policymaking. The Commission's current definition, which is focused on speeds, not capabilities, is hopelessly out-of-date.

Second, despite the promise of new technologies, the broadband market in the Unites States is still a duopoly, at best, particularly for residential and small business

broadband customers. The Commission should take steps to ensure that there is meaningful competition in the residential broadband market. Only competition will provide the greater consumer choice at lower prices that is necessary to spur consumer up-take of advanced capabilities and services on a more widespread basis.

Third, the Commission should quickly take concrete steps to ensure that its policies and regulations keep pace with changes in the marketplace, and thus encourage broadband deployment. In pending and future rulemakings, the Commission should use the layers framework as a tool to make policy decisions that are tailored to the manner in which technology and the market are developing. The Commission should institute a rulemaking proceeding to develop an overarching policy framework founded on the layers-based approach. In addition, the Commission should encourage broadband deployment by providing universal service or other support for broadband access.

Fourth, the Commission should eliminate other barriers to advanced services deployment. Specifically, the Commission should establish a set of special access performance measures and standards for evaluating incumbent LEC performance in the provisioning of special access. In addition, the Commission should act to remove the barriers to rights-of-way access that are imposed by some municipalities. Specifically, the Commission should take steps to ensure that the imposition of non-cost based fees and additional tiers of regulation by some municipalities does not serve as a barrier to the deployment of advanced telecommunications networks. Likewise, the Commission should act to remove the barriers to access to multi-tenant environments (MTEs) erected by building owners and property managers.

Lastly, the Commission should take steps to promote true broadband competition that will enable the United States to successfully compete in the global advanced services arena. In particular, the Commission should take note of the policies employed in South Korea and Japan that fostered market entry by new providers.

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COMMENTS OF MCI, INC.

MCI, Inc. hereby submits its comments in response to the Commission's Fourth Notice of Inquiry into whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.¹

I. INTRODUCTION

As the Commission, the Administration, consumer groups, and industry analysts have recognized, advanced services play a key role in this nation's economic growth.

Thus far, however, the Commission has attempted to promote broadband deployment by

¹ Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such

giving the incumbent local exchange carriers (incumbent LECs) "regulatory relief from certain unbundling requirements. While MCI disagrees that such "regulatory relief" is necessary to promote broadband deployment, having given that "relief" to the incumbent LECs, the Commission should at the very least also take steps to promote, consistent with its public pronouncements multi-modal broadband "pipes" to consumers. Freeing the current "BOC" or "cable" duopoly from regulation without aggressively promoting other modalities carries the significant risk that, in the end, American consumers will have no real choice at all among broadband providers. That being said, MCI has five specific proposals to promote ubiquitous, real broadband deployment in the United States:

First, rather than running the risk of setting the speed too high or too low, the Commission should define advanced telecommunications capability in terms of capabilities instead. In this way, the Commission can recognize the important distinction between advanced telecommunications *services* (*e.g.*, robust VoIP or real-time video streaming) and advanced telecommunications *capability* (*i.e.*, the infrastructure used to support advanced service applications), and pave the way for implementation of a layers-based approach to policymaking. The Commission's current definition, which is focused on speeds, not capabilities, is hopelessly out-of-date.

Second, despite the promise of new technologies, the broadband market in the Unites States is still a duopoly, at best, particularly for residential and small business broadband customers. The Commission should take steps to ensure that there is meaningful competition in the residential broadband market. Only competition will

Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Notice of Inquiry, GN Docket No. 04-54 (rel. March 17, 2004) ("Fourth Section 706 Notice").

provide the greater consumer choice at lower prices that is necessary to spur consumer up-take of advanced capabilities and services on a more widespread basis.

Third, the Commission should quickly take concrete steps to ensure that its policies and regulations keep pace with changes in the marketplace, and thus encourage broadband deployment. In pending and future rulemakings, the Commission should use the layers framework as a tool to make policy decisions that are tailored to the manner in which technology and the market are developing. The Commission should institute a rulemaking proceeding to develop an overarching policy framework founded on the layers-based approach. In addition, the Commission should encourage broadband deployment by providing universal service or other support for broadband access.

Fourth, the Commission should eliminate other barriers to advanced services deployment. Specifically, the Commission should establish a set of special access performance measures and standards for evaluating incumbent LEC performance in the provisioning of special access. In addition, the Commission should act to remove the barriers to rights-of-way access that are imposed by some municipalities. Specifically, the Commission should take steps to ensure that the imposition of non-cost based fees and additional tiers of regulation by some municipalities does not serve as a barrier to the deployment of advanced telecommunications networks. Likewise, the Commission should act to remove the barriers to access to multi-tenant environments (MTEs) erected by building owners and property managers.

Lastly, the Commission should take steps to promote true broadband competition that will enable the United States to successfully compete in the global advanced services

arena. In particular, the Commission should take note of the policies employed in South Korea and Japan that fostered market entry by new providers.

II. THE COMMISSION SHOULD DEFINE ADVANCED TELECOMMUNICATIONS CAPABILITY IN TERMS OF CAPABILITIES, NOT SPEEDS

Defining what broadband is is a critical issue because if you do not know what standard you are trying to achieve, you may achieve a lot less than what you need (or as Yogi Berra put it, "If you don't know where you're going, you're likely to end up somewhere else."). Congress specified that the term "advanced telecommunications capability" should be defined "without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." In interpreting this statutory language, the FCC focused on the term "high-speed" and concluded that "advanced telecommunication capability," means any service exceeding 200 kbps in at least one direction. Consequently, speed of transmission has become the major dividing line between what is and is not considered advanced telecommunications capability or broadband.

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² See 47 U.S.C. § 706.

³ In its First Section 706 Report, the FCC defined broadband as "having the capability of supporting, in both the provider-to-consumer (downstream) and the consumer-to-provider (upstream) directions, a speed (in technical terms, "bandwidth") in excess of 200 kilobits per second (kbps) in the last mile." *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion and Possible Steps to Accelerate Such Deployment*, Report, CC Docket No. 98-146, 14 FCC Rcd 2398 (1999)("First Section 706 Report"). In formulating this definition, the FCC reasoned that 200 kbps provided sufficient bandwidth so that consumers could utilize the capacity to perform popular functions such as surfing the Web or transmitting full-motion video. However, the Commission explicitly acknowledged that "evolution in

The current definition of broadband is hopelessly out-of-date. Two hundred kbps is "high speed" only to telephone monopolies who do not wish to be challenged to implement anything faster. The telephone networks of the incumbent carriers are generally capable of providing consumers with much higher speed broadband. Indeed, Verizon recently announced that it would start offering DSL download speeds of 1.5 Mbps and up to 3 Mbps later this year.⁴ As described later in these comments, in other countries, such as Japan for example, broadband carriers routinely offer download speeds of up to 10 Mbps.

Further, attempting to define broadband merely in terms of speed ignores the issues relating to synchronous or asynchronous download and upload speeds. At present, most residential broadband is asynchronous with the assumption that most consumers prefer to download more than they upload. This assumption ignores the potential for bidirectional full motion video that may be a significant consumer application in coming years.

It is clear that Congress intended that advanced telecommunications capability be defined in terms of capabilities, not speeds. Indeed, the Commission itself supports this distinction, as acknowledged in its First Section 706 Report: "We distinguish between advanced telecommunications capability and services derived from it ("advanced services"), as in the distinction between infrastructure and applications, or between facilities and services offered to end users. We ask that commenters observe this

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technologies, retail offerings, and demand among consumers" may in the future raise the minimum speed for broadband. *Id*.

⁴ Colin C. Haley, "Verizon to Enhance DSL Service," InternetNews, May 4, 2004.

distinction."⁵ Thus, the statutory language in section 706 should be construed as concerning the capabilities of the next generation of infrastructure that will support advanced services, not the speeds at which these advanced services can travel over this infrastructure.

Rather than run the risk of setting the speed too high or too low, the Commission should define advanced telecommunications capability in terms of capabilities. In this way, the Commission can recognize the important distinction between advanced telecommunications *services* (*e.g.*, robust VoIP or real-time video streaming) and advanced telecommunications *capability* (*i.e.*, the infrastructure used to support advanced service applications). Defining advanced telecommunications in terms of capabilities would pave the way for the development of an overarching policy framework based on the layers-based approach which, if implemented, would enable policies and regulations to keep pace with changes in the marketplace and thus encourage broadband deployment.

III. THE COMMISSION SHOULD TAKE AGGRESSIVE STEPS TO ELIMINATE, OR AT LEAST MITIGATE, THE CURRENT BROADBAND DUOPOLY

A. Deployment of High-Speed Services is Still Controlled By Two Types of Providers: Cable Companies and the BOCs

All available statistics show that the deployment of high-speed services is still being controlled by two suppliers: cable companies and the former Bell Operating Companies (BOCs). Of the some 23.5 million high-speed Internet lines in service as of

⁵ First Section 706 Report, at 2398.

June 30, 2004,⁶ about 13.7 million consumers receive their service from cable companies, while 7.7 million consumers get broadband via DSL.⁷

Within the DSL market, it is clear that the incumbent LECs control. In the twelve-month period ending June 30, 2003, 95 percent of all ADSL lines were provided by incumbent LECs, with the four RBOCs having over 84.6 percent of all ADSL lines in service. This is compared to 5.4 percent of non-incumbent LEC (or competitive LEC) total ADSL lines.

Other potential broadband access platforms, such as WiMax, broadband over powerline, MMDS, third and fourth generation wireless mobile technology, and satellite broadband service offer considerable promise, but likely are years away from being realized in a commercially-viable way. WiMax offers considerable promise as a true substitute for the BOC or cable broadband facility; however, WiMax is not yet even being deployed and the economics and commercial acceptance of that that technology has yet to be established. Other wireless broadband opportunities may exist in the future, but the fact is they do not exist now. Broadband over powerline shows some promise, but the record demonstrates that BPL is still very much in its infancy. Specifically, while BPL technology may prove to be a workable broadband conduit in the future, significant

⁶ "High-Speed Services for Internet Access: Status as of June 30, 2003," Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, December 2003 (706 Status Report) at 1, 2, 4.

⁷ *Id.*

⁸ *Id.* at Table 5.

⁹ *Id*.

¹⁰ Inquiry Regarding Carrier Current Systems, Including Broadband Over Power Line Systems, Joint Comments of MCI, ALTS and Covad on Broadband Power Line Notice of Inquiry, ET Docket No. 03-104 (Aug. 20, 2003), at 1-2. See also, Comments of Progress Energy, Inc., at 8; Comments of the Public Safety Wireless Network, at 5.

issues like interference with wireless and wireline systems and lack of standards need to be addressed before it sees widespread deployment. 11

В. This Commission Should Promote Multimodal Broadband Competition

President Bush recently stated, "We need more than just one provider available...for consumers. In our society, the more providers there are, the better the quality will be and the better the pricing mechanisms will be." Chairman Powell has also agreed that a duopoly is "the antithesis of what the public interest demands." ¹³ Just as the Commission has taken steps to eliminate intramodal competition, so too must the Commission take steps to promote intermodal competition, if the broadband market is to become fully competitive. The Telecom Act and President Bush clearly support this kind of competition.

MCI believes that competition is the key to promoting broadband in the United States. Recent statements made by President Bush support this belief. In March 2004, President Bush announced his support for universal, affordable access for broadband technology by the year 2007. 14 President Bush was quoted as saying "...we ought to make sure as soon as possible consumers have got plenty of choices when it comes to

¹² Office of the Press Secretary, "President Unveils Tech Initiatives for Energy, Health Care, Internet," Remarks of the President at the American Association of Community Colleges Annual Convention, Minneapolis Convention Center, Minneapolis, Minnesota, April 26, 2004.

¹³ Application of EchoStar Communications Corporation; General Motors Corporation and Hughes Electronics Corporation (DirecTV), Hearing Designation Order, Statement of Chairman Michael K. Powell, CS Docket No. 01-348 (rel. Oct. 18, 2002).

¹⁴ "Bush Pushes For High-Speed Internet Access By 2007." Reuters Update 1. March 26. 2004.

purchasing the broadband carrier. The more choices there are, the more the price will go down "15"

To promote intermodal competition, the Commission should accelerate efforts to reallocate spectrum or to use existing spectrum assignments more efficiently. The Commission should push to make wireless broadband alternatives commercially and financially viable to use. Specifically, the Commission should monitor the development of standards for wireless broadband technologies such as WiMax and 802.20 to ensure that such technologies as deployed as expeditiously as possible.

C. The Commission Must Not Permit the BOCs' Monopoly Over the Last Mile to Hinder Competitive Broadband Deployment

Until such multimodal opportunities become available, or if such multimodal opportunities do not materialize in the near future, the Commission should reexamine its decisions that all but eliminate intramodal competition. A fundamental underpinning of the 1996 Telecom Act is that competition among service providers is the surest means of ensuring the availability to consumers of an array of telecommunications services at reasonable prices. The Act recognizes that the development of competition will require access by competitive companies to elements of the incumbent LECs' networks, and requires that the prices established for use of these network elements be based on cost. President Bush's goal of taking broadband technology to "every corner of our country by 2007 with competition shortly thereafter".

¹⁵ Office of the Press Secretary, "President Bush Meets with First-Time Homebuyers in NM and AZ," Remarks by the President on Homeownership, Expo New Mexico, Albuquerque, New Mexico, March 26, 2004 ("President Bush's March 26, 2004 Remarks").

¹⁶ President Bush's March 26, 2004 Remarks.

competitors to have nondiscriminatory and cost-based access to the last-mile facilities controlled by the BOCs.

MCI has expended significant resources at the Commission, in the Courts and on Capitol Hill to fight for rules that are consistent with the competitive mandate of the Telecom Act. Without pro-competitive rules granting access to the last-mile upstream facilities, MCI would not be able to compete in the broadband business. Unfortunately, just as the pro-competitive rules were beginning to bear fruit, the Commission issued its *UNE Triennial Review Order* which undoes many of the pro-competitive policies of the 1996 Act.¹⁷

In particular, the *UNE Triennial Review Order* would permit the incumbent LECs to refuse to offer new fiber-to-the home (FTTH) and the high-frequency portion of the loop as unbundled network elements pursuant to section 251. In addition, the *UNE Triennial Review Order* concludes that section 251 requires Incumbent LECs to provide a narrowband voice channel over hybrid copper/fiber loops, but that section 251 does not require those loops to be unbundled in a manner that permits competitive LECs to offer

¹⁷ Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, 18 FCC Rcd 16978, as modified by Errata, 18 FCC Rcd. 19020, ¶ 109 (2003)("UNE Triennial Review Order"). Mark Cooper of the Consumer Federation of America accurately captures the impact of the UNE Triennial Review Order on America's broadband future: "What the FCC is in the process of doing for the first time in the history of this country is to allow the major means of communication in this country to be private, closed networks. Essentially (the FCC) will strangle competition for the 21st century technologies," cited in Larisa Brass, "Fight Over Fiber Optics," ITAA, Innovation at the Edge (Sept. 21, 2003). Commissioner Copps agrees: "This decision plays fast and loose with the country's broadband future. Make no mistake about it, today's decision chokes off competition in broadband. Consumers, innovation, entrepreneurs and the Internet itself are going to suffer." Copps adds, "This is not a brave new world of broadband, but simply the old system of local monopoly dressed up in a digital cloak." FCC Press Release, "FCC Commissioner Michael J. Copps Reacts to Release of Long-Awaited Triennial Review Decision" (Aug. 21, 2003).

DSL service.¹⁹ Further, the BOCs have each filed a petition for forbearance requesting that the Commission forbear from enforcing the independent obligation, pursuant to section 271 of the Act, to unbundle broadband facilities that those carriers are no longer required to unbundle pursuant to Commission decisions under section 251.²⁰ Should the BOCs succeed, innovation will be curbed and the cost of these future services will be raised for consumers. MCI vigorously opposes these petitions and believes that granting them will slow down broadband deployment.²¹

Presumably, the Commission eliminated broadband competition on the hope that new technologies would disrupt the existing BOC/cable broadband duopoly. While MCI certainly hopes for multiple broadband choices, it is risky to bet on any technology that has yet to prove itself in any marketplace. Our recent history is littered with the bodies of promising technologies that never made it to the market or that did not last long in the market. So, until such intermodal opportunities become real, or if such intermodal opportunities do not materialize, the Commission should ensure that safeguards are in place to prevent the BOCs from extending their market power over last mile facilities to broadband services. Specifically, the Commission should re-examine its recent rules that blocked competitors from gaining broadband access to incumbent LEC last mile fiber facilities. In addition, the

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¹⁸ UNE Triennial Review Order, at ¶ 286, 288, 290.

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²⁰ See, BellSouth Telecommunications, Inc. Petition for Forbearance Under 47 U.S.C. § 160(c), WC Docket No. 04-48 (March 1, 2004); Qwest Communications International Inc. Petition for Forbearance Under 47 U.S.C. § 160(c), WC Docket No. 03-260 (Dec. 18, 2003); Petition for Forbearance of SBC Communications Inc., WC Docket No. 03-235 (Nov. 6, 2003); New Petition for Forbearance of the Verizon Telephone Companies, CC Docket No. 01-338 (Oct. 24, 2003).

²¹ See, *In the Matter of Section 271 Petitions for Forbearance of BellSouth, Qwest, SBC and Verizon*, Written *Ex Parte* Presentation of Z-Tel and MCI, WC Docket Nos. 04-48, 03-260, 03-235 and CC Docket No. 01-338 (Mar. 23, 2004).

Commission should consider implementing the layers principles described in section IV herein to tailor regulation that ensures that entities without market power have access to bottleneck facilities.

D. The Cable/DSL Duopoly Will Prevent Independent ISPs from Offering **Broadband Services in Large Parts of the Market**

One important result of BOC dominance of the DSL market is the impact on independent Internet service providers (ISPs). Over the past thirteen years, innovative ISPs have helped drive the tremendous growth of the Internet, transforming it into a powerful communications and technology tool for consumers, businesses and organizations, stimulating small business development, and benefiting the entire economy by competing for residential and business customers alike in a robustly competitive market.

At present there are but two broadband platforms available with the nearubiquitous reach ISPs require – cable modem service and DSL service.²² Given the FCC's staunch refusal to require the major cable companies to open up their modem platforms to competitive LECs or ISPs, and BOC-affiliated ISPs' dominance of Internet access over BOC DSL, DSL provided by competitive LECs, until very recently, was the only realistic alternative remaining. Unfortunately, the *UNE Triennial Review Order* has cut off this avenue of access for competitive LECs (and therefore ISPs) by phasing out the line-sharing requirement over three years and by denying competitive LECs access to hybrid fiber/copper loops for purposes of providing DSL services. Now, independent ISPs will be forced to deal with the BOC or cable monopoly to access customers.

Donald Evans, Secretary, U.S. Department of Commerce, and The Honorable Michael Powell, Chairman, Federal Communications Commission, CC Docket Nos. 02-33, 01-338 (May 20, 2002).

²² Letter from Vinton G. Cerf, Senior Vice-President, WorldCom, Inc., to The Honorable

The Commission's failure to preserve meaningful choices for ISPs among wholesale mass-markets broadband telecommunications providers will prevent independent ISPs from offering broadband services in large parts of the market. As consumer demand for broadband-based information services increases, and as the demand for narrowband-based services drops, ISPs will be foreclosed from any meaningful participation in the information services market. An industry that is now vibrant and highly competitive will become dominated by two suppliers (the incumbent LECs and the cable companies), thus limiting consumer choice and, ultimately, broadband deployment.

The public telephone network must provide an open platform available to diverse competitors, ISPs, and content providers. Monopolization of Internet broadband services over copper plant – or fiber – is completely inconsistent with the founding principles of the Internet – that the public interest is best served by open, nondiscriminatory, and diverse public communications systems.

IV. THE COMMISSION SHOULD ADOPT A HORIZONTAL LAYERS FRAMEWORK TO STIMULATE ADVANCED SERVICES DEPLOYMENT

The Commission must ensure that its policies and regulations keep pace with changes in the marketplace and thus encourage broadband deployment by employing a horizontal layers framework. The current "vertical" legal and regulatory scheme is no longer compatible with an IP-centric world built along "horizontal" network protocol layers.²³

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²³ See, "A Horizontal Leap Forward: Formulating a New Public Policy Framework Based on the Network Layers Model," Richard S. Whitt, MCI, December 2003 ("Whitt, A

MCI's recent public policy paper, "A Horizontal Leap Forward: Formulating a New Public Policy Framework Based on the Network Layers Model," urges regulators to replace its current "silo" approach to policymaking with a layers-based approach which is better suited for IP networks. ²⁴ Under this approach, the FCC would develop policies in the context of a layers framework, and would focus on four distinct layers of the network – the physical layer (copper, fiber, coaxial cable, satellite), logical layer (IP, special access, DSL, ATM, Ethernet), applications layer (VoIP, e-mail), and content layer (text, speech, pictures, etc.). ²⁵ This approach would allow the Commission to focus not on the services that have historically been tied to discrete networks, facilities, or technologies, but rather on the conceptual layers most relevant to its policymaking jurisdiction. ²⁶

Under this layers model, the Commission would be able to focus on potential issues with respect to market power in different layers. One of the key principles in a layers-based public policy framework is that entities with market power in one layer must be prevented from extending that market power to a higher layer.²⁷ Most market power is concentrated primarily in the physical and logical network access layers.²⁸ Thus, the Commission would be able to regulate those layers to the extent necessary to prevent the abuse of market power.

To address the issue of the current BOC DSL monopoly, for example, the Commission could apply the layers principles to tailor regulation that ensures that entities

Horizontal Leap Forward"); *see also*, "Adapting FCC Policymaking to the Network Layers Model: A Roadmap for FCC Action," Richard S. Whitt, MCI, March 2004, at 2-5 ("Whitt, Adapting FCC Policymaking to the Network Layers Model").

White, Adapting FCC Policymaking to the Network Layers Model, at 4.

²⁵ *Id*. at 5.

²⁶ *Id*.

²⁷ *Id.* at 6-7.

without market power have access to bottleneck facilities. The application layer (Internet access) is separate from the underlying physical layer (DSL), which fundamentally is a transmission service capability.²⁹ Last-mile physical access layer facilities providers with market power would not be allowed to restrict choice, innovation, and competition at the higher layers. 30 Incumbent LECs would be required to continue allowing nondiscriminatory access to their DSL transmission services, unless and until market power concerns were no longer an issue.³¹

The Communications Act is flexible enough to allow the Commission to begin the process of incorporating the layers approach into its policymaking. In fact, section 706 of the Act already recognizes the independence of applications from underlying networks, defining "advanced telecommunications capability" as consisting of the ability of users to originate and receive a panoply of "voice, data, graphics, and video" applications and services "without regard to any transmission media or technology." 32

In this and future section 706 inquiries, the Commission should use the layers framework as a tool to make policy decisions that are tailored to the manner in which technology and the market are developing. This way the Commission would be able to preserve maximum innovation at the "edge" of the network, giving consumers more choices. Indeed, Chairman Powell has recognized the value of the layers approach in "establishing a rational policy environment for IP-based services to continue to evolve." 33

²⁸ *Id*.

²⁹ *Id.* at 10.

³⁰ *Id.* at 6-8, 10.

³¹ *Id.* at 6-8.

³² 47 U.S.C. § 706.

³³ Michael K. Powell, Chairman, Federal Communications Commission, Opening Remarks at the FCC Voice Over Internet Protocol Forum, at 1 (Dec. 1, 2003).

Brett Perlman, as Commissioner of the Texas Public Utility Commission, told the Commission that it could meet its goals of encouraging broadband competition and network investment "if it were to apply a 'layered model' to broadband infrastructure." Concurrent with this Inquiry, the Commission should institute a rulemaking proceeding to develop an overarching policy framework founded on the layers-based approach.

V. THE COMMISSION SHOULD CONSIDER WAYS OF EXPANDING BROADBAND ACCESS TO RURAL AND UNDERSERVED AREAS, EITHER THROUGH THE EXISTING FEDERAL UNIVERSAL SERVICE FUND OR A NEWLY CREATED FUND

The Commission seeks comment on what role universal service could play in ensuring that deployment of advanced services is reasonable and timely for all Americans.³⁵ MCI urges the Commission to consider ways of expanding broadband access to rural and underserved areas, either through the existing federal universal service fund or a newly created fund. If, as many experts believe, broadband access constitutes the "local loop" of the 21st century, federal support may be critical to ensuring that all Americans have access to the full range of telecommunications services available today and in the near future. Indeed, consumers are increasingly demanding access to broadband services,³⁶ yet there is a relative scarcity of such access in certain parts of the

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³⁴ Letter from Brett Perlman, Commissioner, Texas Public Utility Commission, to The Honorable Kevin Martin, Commissioner, Federal Communications Commission, at 3-4 (Jan. 28, 2003).

³⁵ Fourth Section 706 Notice, at ¶ 22.

³⁶ See, e.g., 706 Status Report, at 2 ("subscribership to high-speed services increased by 18% during the first half of 2003, to a total of 23.5 million lines (or wireless channels) in service) and 3 ("As of June 30, there were about 20.6 million high-speed lines serving residential and small business subscribers...there were about 17.4 million such lines six months earlier.")

country.³⁷ A narrowly tailored federal fund would help bridge the gap between broadband access supply and demand.

In providing support for broadband deployment, the Commission should provide support only for broadband access, or the physical infrastructure on top of which broadband-based applications and services ride. Supporting only the broadband access layer of the network is consistent with MCI's recent public policy paper, "A Horizontal Leap Forward: Formulating a New Public Policy Framework Based on the Network Layers Model," in which MCI argues that regulators should employ a different regulatory framework that considers four distinct layers of the network – the physical layer (copper, fiber, coaxial cable, satellite), logical layer (IP, special access, DSL, ATM, Ethernet), applications layer (VoIP, e-mail), and content layer (text, speech, pictures, etc.). 38 Support would only be provided for the physical and logical layers, but not the applications and content layers, as this would increase the size of the fund unnecessarily, is unrelated to providing consumers with access to the functionalities that broadband access provides, and would provide support to companies that may not pay into the fund. Moreover, because the purpose of universal service is to build networks and provide service to rural and under-served areas, it is unnecessary to support applications and content, which are not sensitive to distance.

Support for the broadband access layer would also enable the development of robust broadband competition, bringing greater choice and lower prices to consumers.

³⁷ *Id.* at 4 ("High population density has a positive association with reports that high-speed subscribers are present, and low population density has an inverse association. For example, as of June 30, 2003, high-speed subscribers are reported to be present in 99% of the most densely populated zip codes and in 69% of zip codes with the lowest population densities").

DSL and cable modem service compete head-to-head in only about one-third of the country, while a majority of American consumers have access to either only one broadband provider or none at all.³⁹ Federal support should be provided to other potential broadband access providers, such as broadband over power line, satellite broadband technology, or wireless mobile technology, in order to foster the development of a rich array of broadband access providers from which consumers can choose.

In providing support for broadband access, the Commission could either create a new fund (which we will call for purposes of these comments the "Broadband Connectivity Fund") or expand the existing universal service fund. In either case, the Commission likely would need legislation from the U.S. Congress explicitly authorizing creation or expansion of such funds.

A Broadband Connectivity Fund could be established pursuant to a new section of the Act or pursuant to section 706, which provides the Commission with broad authority to "encourage the provision of new technologies and services to the public." ⁴⁰ If created pursuant to section 706, new legislative language specifically authorizing such a funding mechanism would provide the soundest legal basis on which the Commission could proceed.

Under the Broadband Connectivity Fund, support would be provided to broadband access providers in rural and high cost areas. The definition of a rural or high cost area could mirror that established by the Commission pursuant to section 254, or the

³⁸ See generally Whitt, A Horizontal Leap Forward.

³⁹ See "Codifying the Network Layers Model, MCI's Proposal for New Federal Legislation Reforming U.S. Communications Law," Richard S. Whitt, MCI, March 2004, at 5

⁴⁰ 47 U.S.C. § 157(a).

Commission could undertake development of a new definition. The Commission would have the flexibility to decide which types of providers would pay into the Fund, but MCI recommends that only broadband access providers pay into the fund, at least initially, in order to associate payments with the receipt of support. That is, the subsidy would come from the same network segment as to where it is applied -- broadband access platforms.

Alternatively, the Commission could instead choose to expand the existing Universal Service Fund to provide support for broadband access. For the reasons described above, support would be provided only for the physical and logical layers of the network, not the applications or services that ride on top of the physical and logical infrastructure. Consistent with section 254(d), every telecommunications carrier that provides interstate telecommunications (including broadband access providers) would contribute to this expanded Universal Service Fund. Such carriers would contribute on a per-connection or per-telephone number basis. Any expansion of the Fund to include broadband access is not sustainable unless and until the Commission replaces the current revenues-based funding mechanism with the more rational connections, or telephone numbers-based, contribution mechanism, which MCI and others have advocated for several years. With the increase of bundled-service offerings that include services subject to varying regulatory treatment and the increase of IP-based products, a revenuesbased contribution is nearly impossible to apply in a rational manner. A connectionsbased contribution mechanism, however, is consistent with the bundled environment and the ways that consumers access and utilize networks. In addition, a connections-based contribution system would associate universal service payments with physical facilities, rather than the provision of service, which advances the goal of universal service in that

most of the expense in high-cost areas stems from providing access to facilities, not services.

In addition, amendment of section 254 of the Act would be helpful in providing direction to the Commission regarding universal service support for broadband access. Section 254(c)(1) currently requires the Commission to consider the extent to which any new service supported by universal service is "essential to education, public health, or public safety," is "subscribed to by a substantial majority of residential customers," is "being deployed in public telecommunications networks by telecommunications carriers," and is "consistent with the public interest, convenience, and necessity." It would be beneficial in avoiding the distraction of potential arguments and litigation over the meaning of this standard if Congress explicitly directed the Commission to provide universal service support for broadband access.

VI. THE COMMISSION SHOULD ELIMINATE OTHER BARRIERS TO ADVANCED SERVICES DEPLOYMENT

A. **Poor Special Access Provisioning by the BOCs Deprives Businesses** of Innovative Competitive Offerings

Special access is a key vehicle for the provision of broadband services to medium and large businesses. Over two years ago, the FCC issued a Notice of Proposed Rulemaking on the need for federal performance measurements and standards for evaluating incumbent LEC performance in the provisioning of special access.⁴² The Notice was released in response to concerns expressed by a broad range of competitors and large users that the provision of special access by the incumbent LECs is

⁴¹ 47 U.S.C. § 254(c)(1).

unreasonably poor and unreasonably discriminatory. This Notice is still pending before the Commission.

The poor quality of ordering, provisioning, maintenance, and repair of special access services offered to competitors by the incumbent LECs deprives medium and large businesses of innovative competitive offerings. Competitors, including MCI, fear that since the BOCs have gained section 271 entry in every state, they now have the incentive as well as the ability to discriminate against other carriers in the provision of these important inputs. The Commission should ensure that competitors have access to the special access facilities necessary for the provision of broadband services.

B. Non-Cost-Based Fees Imposed by Municipalities for Right-Of-Way Access and Delays in the Permitting Process are Significant Barriers to Advanced Services Deployment

Access to rights-of-way (ROW) is critically important to the deployment of telecommunications facilities – the backbone and access facilities integral to broadband deployment. Increasingly, leading policy makers like Chairman Michael Powell, President Bush, Commissioner Martin, and others have recognized the impact that rights-of-way issues can have on the speed and cost of deployment and the detriment to the country and economy caused by right-of-way road blocks and toll booths erected in the path of broadband and advanced network deployment by some governments and municipalities.

As MCI has demonstrated for the record, in the six years since passage of the 1996 Act, non-cost-based fees imposed by local governments for use of the right-of-way and delays in the permitting process have emerged as significant barriers to the

⁴² Performance Measurements and Standards for Interstate Special Access Services,

deployment of advanced telecommunications and broadband networks.⁴³ In addition, the imposition of additional tiers of regulation and burdensome and costly terms and conditions that are unrelated to the management of the right-of-way have made it difficult, if not impossible, for the industry to serve multiple jurisdictions.

In order to spur broadband deployment, the Commission should declare, via a petition for declaratory ruling, if necessary, that fair and reasonable compensation for access to rights-of-way under section 253(c) of the Act must be cost-based.

C. A National Set of Rules Prohibiting Unreasonable Building Access Requirements is Needed to Promote Broadband Deployment

Similarly, a national set of rules prohibiting unreasonable building access requirements is needed to promote broadband deployment. MCI urges the Commission to follow the recommendations MCI has put on record in the Competitive Networks docket aimed at eliminating the barriers competitive service providers face in gaining access to tenants in multi-tenant environments (MTEs). Specifically, the Commission should establish rules that remove the disincentives for competitive service providers to make facilities-based investments in the advanced services market. Further, the Commission should recommend that the Administration take positive steps toward non-discriminatory access in federal buildings. Lastly, the Commission should establish a national set of

Notice of Proposed Rulemaking, CC Docket No. 01-321 (rel. Nov. 19, 2001).

⁴³ See, e.g., Promotion of Competitive Networks in Local Telecommunications Markets, Comments of WorldCom, AT&T, Sprint, ICG, GTE, WT Docket No. 99-217, filed Oct. 12, 1999; see also, Ex Parte Presentation of the Telecommunications Industry Rights-of-Way Working Group (I-ROW), CC Docket No. 98-146 (May 24, 2002).

⁴⁴ See, e.g., Promotion of Competitive Networks in Local Telecommunications Markets, Comments of MCI WorldCom, Inc., CC Docket No. 99-217, filed March 8, 2002; see also, Letter from the Smart Buildings Policy Project (SBPP) to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, WT Docket No. 99-217 (Aug. 9, 2002).

rules for the states to follow that ensure reasonable and nondiscriminatory access to tenants in MTEs.

VII. THE UNITED STATES NEEDS TRUE BROADBAND COMPETITION TO SUCCESSFULLY COMPETE IN THE GLOBAL ADVANCED SERVICES ARENA

In the Fourth Section 706 NOI, the Commission seeks comment on why the United States was ranked eleventh worldwide in broadband use in a September 2003 report by the International Telecommunications Union. A brief analysis of two countries that lead in broadband deployment, South Korea and Japan, indicates that there are numerous reasons that certain countries have surged ahead. Among these reasons, however, one factor stands out as being essential: the existence of vibrant competition. In South Korea and Japan, vigorous competition has led to increases in service quality and decreases in price, thus driving consumers to embrace broadband.

The widespread deployment of broadband in South Korea, Japan, and other countries has enabled directly involved industries such as broadband service providers, equipment manufacturers, and content providers to flourish. That effect alone is of enormous economic importance. Of broader importance, however, are the extraordinary

⁴⁵ Fourth Section 706 Notice at ¶ 43; *ITU Internet Reports: Birth of Broadband*, International Telecommunications Union, Geneva, September 2003, at 1, Figure 1.1, "Broadband penetration rates around the world."

⁴⁶ In broadband deployment rankings as of June 2003 by the Organization for Economic Cooperation and Development, South Korea was ranked first in broadband deployment and Japan was ranked ninth. "Broadband Access in OECD Countries per 100 Inhabitants," Organization for Economic Cooperation and Development (June 2003) (available at

http://www.oecd.org/document/60/0,2340,en_2825_495656_2496764_1_1_1_1,00.html). Although the United States was ranked just behind Japan on this list, broadband access speeds in the United States are not nearly as high, and prices are not nearly as low, as in Japan.

benefits and opportunities that extensive deployment brings to individuals, small and medium-sized businesses, enterprise businesses, government institutions, and virtually all other types of entities. A very short list of the many examples of such benefits and opportunities includes the ability to: (1) instantaneously order and enjoy goods, services, and entertainment, thus increasing the demand for such items by making them more accessible; (2) hold meetings and conferences via broadband rather than incurring the cost and time lag of traveling; and (3) set up virtual offices with employees and contractors in different points around the country or even world, thus truly bridging the gap between workers' geography and employers' hiring needs. Benefits and opportunities such as these enable countries to successfully compete and thrive in an increasingly fast-paced global economy.

A. True Competition is the Key to Extensive Broadband Deployment

South Korea and Japan demonstrate that while countries can have numerous factors that facilitate extensive broadband deployment, the essential, underlying driver of deployment is competition. First, in terms of the ancillary factors, South Korea's and Japan's populations are primarily concentrated in densely populated cities, with many residents living in large multi-dwelling buildings. South Korea is geographically smaller than Virginia but has a population of approximately 48 million, with 80% of those people living in urban areas and 90% of them within 2.5 miles of a telecommunications provider's central office (thus greatly facilitating the provision of distance-sensitive DSL service). South Korea is also very culturally attuned to Internet use, in large part as a result of government initiatives to integrate it into people's daily lives. For example, the

South Korean government has sponsored computer literacy programs for specific population segments such as stay-at-home parents and military personnel.⁴⁷

Despite the existence of favorable ancillary factors, however, neither South Korea nor Japan began experiencing rapid broadband deployment until the broadband market was opened (as discussed further below) and new entrants were able to successfully enter. In South Korea, competition was spurred by new entrants leasing cable capacity in the late 1990s.⁴⁸ Incumbent Korea Telecom entered the market in response to the new entrants and began competing vigorously.⁴⁹ As a result, multiple broadband providers have competed strenuously over the past several years to provide consumers with everincreasing access speeds and ever-decreasing prices. By August 2003, South Korea had six major broadband providers, and the average monthly rate was approximately \$28.⁵⁰ Thus, competition has made very fast broadband service affordable to the average South Korean family.

The situation is similar in Japan. Around September 2001, Yahoo BB and eAccess Ltd., independent broadband providers in Japan, began offering 8 mbps service in certain areas at approximately \$22 per month, less than half of what incumbent NTT

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⁴⁷ Kyounglim Yun *et al.*, "The Growth of Broadband Internet Connections in South Korea: Contributing Factors," Asia/Pacific Research Center, at 16 (Sept. 2002).

⁴⁸ Sherille Ismail and Irene Wu, "Broadband Internet Access in OECD Countries: A Comparative Analysis," Federal Communications Commission Office of Strategic Planning and Policy Analysis and International Bureau, at 12 ("Broadband Internet Access in OECD Countries").

⁴⁹ *Id*.

⁵⁰ Jong-won Seong, "Key Issues in Korean Broadband Regulation," South Korea Ministry of Information and Communication, p. 10 (July 10, 2003) (available at http://www.aptsec.org/seminar/meeting-2003/policy-forum/documents/3.1_Korea.ppt); Korea Telecom, Hanaro Telecom, Thrunet, Onse Telecom, Dream Line, and Dacom. Korea Communications Commission, Brochure dated October 2003, at 14.

was charging for a slower connection.⁵¹ NTT rapidly responded by dropping its price and matching the independent companies' access speeds.⁵² Competition in Japan has continued unabated, with Yahoo BB launching a 26 mbps service in July 2003 and eAccess announcing plans for a 40 mbps service.⁵³

B. South Korea Achieved True Broadband Competition Through Government Policies That Fostered Market Entry

The competitive broadband marketplace in South Korea was enabled by government policies that fostered market entry by new broadband providers. When South Korea's broadband market was starting to develop in the late 1990s, the country's cable television rules mandated structural separations between infrastructure and content.⁵⁴ As such, the cable infrastructure owners – Powercomm and Korea Telecom – were permitted only to lease access to programming providers, not offer their own programming.⁵⁵ New broadband entrants were thus able to initiate competition by leasing cable lines to reach customers' homes and businesses.⁵⁶ The structural separation rules were later relaxed, but cable infrastructure leasing continued and, in any event, access to the existing infrastructure had enabled competition to take hold.⁵⁷

The other primary means of broadband delivery in South Korea, DSL, is not characterized by open access to the existing telephone infrastructure. However, to spur early development of new DSL local networks, the South Korean government offered

⁵¹ Phred Dvorak, "A Web Maverick Sparks Revolution in Wiring Japan," THE WALL STREET JOURNAL, October 17, 2003, at A1 ("Dvorak, 'A Web Maverick Sparks Revolution in Wiring Japan').

⁵² *Id*.

⁵³ *Id*.

⁵⁴ Broadband Internet Access in OECD Countries, at 12.

⁵⁵ *Id*.

⁵⁶ *Id*.

broadband service providers loans at the prime rate to develop additional networks.⁵⁸

This loan program is expected to continue through 2005.⁵⁹ Additionally, construction of local networks in South Korea is far more economically feasible – and simpler in general – than in the United States due to the fact that the entire country is much smaller geographically and the majority of the population lives in densely populated urban areas, largely in multi-dwelling buildings located within 2.5 miles of switching centers.

Network build-out is also eased by the fact that building landlords, not the incumbent telephone company, own the block wiring in multi-dwelling units.⁶⁰ The net result of these factors is that in South Korea, unlike the United States, construction of local networks by new entrants has been economically feasible.

South Korea's precise model for broadband success could not be duplicated in the United States, principally due to the countries' vastly different sizes and population density characteristics. A lesson that the Commission can take away from South Korea, however, is the importance of open access to existing local networks. It is no accident that South Korea's broadband revolution took root on lines leased from cable infrastructure owners, and that form of competition remains an important part of the country's broadband landscape.

⁵⁷ Id

⁵⁸ Nae-Chan Lee, "Broadband Internet Service: Korea's Experience," at 8 (Feb. 2002) (available at

http://www.mic.go.kr/eng/res/res_pub_db/res_pub_sep_brd/Broadband_Internet_in_Kore a 2002.pdf).

⁵⁹ Id.

⁶⁰ "Investigating Broadband Deployment in South Korea; Broadband Mission to South Korea," DTI/Brunel University, Section 4.3, at 36 (Oct. 2002) (available at http://www.broadbanduk.org/reports/SKorea_report.pdf).

C. Japan Achieved True Broadband Competition through Unbundling and Other Proactive Government Policies

Japan is an excellent example of the power of unbundling to spur broadband competition. In the late 1990s, NTT, Japan's incumbent carrier, had no substantial broadband competition and, hence, was still offering out-moded ISDN rather than developing a DSL product. However, in August 1999, motivated by a request from a start-up competitive carrier, the Japanese government required NTT to unbundle its network for broadband services. NTT approached its unbundling obligations unenthusiastically, indicating resistance to the opening of its lines. Little was accomplished in the way of effective competition until, in December 2000, the Japanese government reproached NTT and pushed it to cut its network element rates. It also required it to unbundle fiber-to-the-home loops. It was then that competitive carriers finally began to make headway in accessing NTT's network and providing DSL services.

By December 2001, with unbundling of NTT's network in full effect, the number of DSL customers in Japan had reached 2.3 million.⁶⁷ By the end of 2002 the number had leapt to 5.6 million, by the end of 2003 to 10.3 million, and as of March 2004 it had increased to 11.2 million.⁶⁸ Japan's escalating DSL subscribership has been driven by

⁶¹ Broadband Internet Access in OECD Countries, at 17.

⁶² Dvorak, "A Web Maverick Sparks Revolution in Wiring Japan," at A1.

⁶³ *Id*.

⁶⁴ *Id*.

⁶⁵ Broadband Internet Access in OECD Countries, at 17.

⁶⁶ Dvorak, "A Web Maverick Sparks Revolution in Wiring Japan," at A1.

⁶⁷ Broadband Internet Access in OECD Countries, at 17.

⁶⁸ Press Release, "Number of Internet Users (As of March 31, 2004)," Japan Ministry of Home Management, Public Affairs, Posts, and Telecommunications (Apr. 30, 2004) (available at http://www.soumu.go.jp/joho_tsusin/eng/Statistics/number_users.html).

the hallmarks of vibrant broadband competition: multiple providers, increasing speeds and falling prices. Yahoo BB recently offered 26 mbps service and eAccess Ltd. announced 40 mbps service, and 8 mbps service can be obtained for around \$22 per month. ⁶⁹ All of this was made possible by unbundling NTT's network, which enabled competitive providers to compete vigorously on service (including access speeds) and price. Importantly, unbundling and the resultant competition also finally spurred NTT itself to actively compete on service and price, thus inserting its enormous resources into the push for better consumer products.

In addition to unbundling, the Japanese government has encouraged the development of fiber networks through financial incentive programs. First, below-market-rate loan programs and tax breaks are available to carriers deploying fiber and/or undertaking digitization investments. Second, the Japanese government subsidizes local governments' construction of local area networks, with carriers being permitted to utilize the spare capacity on these networks on a non-discriminatory basis. Third, the government promulgated guidelines and standards on rights-of-way, to smooth competitors' access to incumbents' poles, ducts, and conduits.

As demonstrated in Japan, pro-competitive government policies lead to a robust marketplace characterized by increasing service and technology and decreasing prices. It would be difficult for DSL providers in the United States to achieve, in the near future, the extraordinarily high access speeds enjoyed in Japan, due to the fact that Japan's

⁶⁹ Dvorak, "A Web Maverick Sparks Revolution in Wiring Japan," at A1.

⁷⁰ Yasu Taniwaki, "Emerging Broadband Market and the Relevant Policy Agenda in Japan," JOURNAL OF INTERACTIVE ADVERTISING, Vol. 4, No. 1 (Fall 2003).
⁷¹ *Id.*

⁷² *Id*.

population is much more densely situated and many of its DSL loops have shorter runs into customer premises (in general, the shorter the distance a DSL signal has to travel, the greater the possible bandwidth). However, the lesson provided on the importance of broadband unbundling remains clear: unbundling spurs competition that otherwise would not exist. New competitors will enter the market, and rather than causing incumbents to cease investing due to network sharing requirements, incumbents will compete vigorously on both technology and price in order to protect their market share.

VIII. CONCLUSION

MCI respectfully requests that the Commission consider seriously the five specific proposals described herein to promote ubiquitous, real broadband deployment in the United States.

Respectfully submitted,

/s/____

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